

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-9 are presently active in this Application. The specification and Claims 1 and 3-8 are currently amended. Support for the amendments to the specification is self-evident from the original specification. Support for the amendment to Claim 1 is evident from Claim 1 itself and from Figures 1 and 2, for example. Claims 3 and 4 are placed in independent form. Support for the amendments to Claims 5-8 can be found on page 6, lines 21-29, for example. No new matter is added.

In the outstanding Office Action, the specification was objected to for minor informalities; the Examiner suggested substitute claim language for clarification of the claims; Claims 1-9 were objected to because of minor informalities; Claims 5-8 were rejected under 35 U.S.C. § 112, second paragraph, as indefinite; Claims 1-2 and 9 were rejected under 35 U.S.C. § 102(b) as anticipated by Hendley et al. (U.S. Patent No. 4,872,812, hereafter, “Hendley”); Claims 1-2 and 9 were rejected under 35 U.S.C. § 102(e) as anticipated by Herman et al. (U.S. Patent No. 6,786,696, hereafter, “Herman”); Claims 1-2 and 9 were rejected under 35 U.S.C. § 102(b) as anticipated by Groover et al. (U.S. Patent No. 6,354,803, hereafter “Groover”); and Claims 5-6 were rejected under 35 U.S.C. § 103(a) as obvious over either Herman or Groover. Claims 3 and 4 were indicated as reciting allowable subject matter.

Applicants note with appreciation the indication that Claims 3 and 4 recite allowable subject matter.

Regarding the objection to the specification, the specification is amended to address the minor informalities noted in the outstanding Office Action. Accordingly, Applicants respectfully request withdrawal of the objection to the specification.

Regarding the Examiner's suggested amendments to the claim language recited in Claim 1, Applicants have amended Claim 1 along the lines of the Examiner's suggestions.

Regarding the objections to Claims 1-9 for minor informalities, Applicants respectfully submit that as the word "a" is amended is replaced with "an" in Claim 1, line 11, the objection to Claims 1-9 is overcome.

Regarding the rejection of Claims 5-8 under 35 U.S.C. § 112, second paragraph, Claims 5-8 are amended to clarify that the range of less than or equal to 0.7 mm refers to the depth of a recess. Accordingly, Applicants respectfully request withdrawal of the rejection of Claims 5-8.

Regarding the rejection of Claims 1-2 and 9 under 35 U.S.C. § 102(b) as anticipated by Hendley, that rejection is respectfully traversed by the present response.

Amended Claim 1 recites, in part, "a front wall integrally molded in the vicinity of the base portion of the front seal fin, the front wall surrounding a front side-edge portion of the front engagement member to form at least one half of a circular shape." Amended Claim 1 also further recites, "a rear wall integrally molded in the vicinity of the base portion of the rear seal fin, the rear wall surrounding a rear side-edge portion of the rear engagement member to form at least one half of a circular shape." Accordingly, the front wall and the rear wall each form shapes that are at least approximately one half of a circle, respectively.

In contrast, Hendley describes flanges (47) and (48) that capture the ends of the insert (49') against further radially inward movement during low speed rotation of the rotor. During high speed rotation, the insert (49') moves outward due to centrifugal force. This outward movement is by design. Hendley states:

As rotor rotation is increased, **centrifugal forces are exerted on the element 49 throw the element 49 radially outward against the converging surfaces 51, 54 toward the gap 37, driving the insert into the position 49' shown in solid lines, with one of the surfaces 58 (e.g. 58b) pressed against the surface 64 of the blade and another of the surfaces 58**

(e.g. 58c) pressed against the surface 51 of the adjacently mounted blade 14. **This acts to seal the spacing gap 37 between the opposing platform edges 52, 54 of blades 47, 16 against the uncontrolled flow of gases between the regions above and below the platforms 35 and 18.**¹ (emphasis added).

Accordingly, it is important that the insert 49' is free to move outward radially. The flanges (47) and (48) contain the insert (49') in along one direction of movement, but allow the insert (49') to move in another direction (radially outward). Therefore, the flanges (47) and (48) have substantially flat surfaces.² If Hendley had flanges (47) and (48) with walls that formed a half circle as recited in amended Claim 1, Hendley would not allow movement of the insert (49') in the radial direction, and, therefore, Hendley would not function for its intended purpose. Accordingly, Applicants respectfully submit that amended Claim 1 patentably distinguishes over Hendley for at least the reasons discussed above.

As Claims 5-9 depend from amended Claim 1, Applicants respectfully submit that dependent Claims 5-9 patentably distinguish over Hendley for at least the same reasons as independent Claim 1.

Regarding the rejection of Claims 1-2 and 9 as anticipated by Herman, that rejection is respectfully traversed by the present response.

Applicants will use the annotated Figure provided in the outstanding Office Action, page 8, in the discussion of Herman. The outstanding Office Action points to elements D and F as a front engagement member and rear engagement member respectively, and to elements E and G as a front wall and rear wall, respectively. The figure shows the walls E and G as forming substantially rectangular pockets with no portion that is shaped in the form of a half circle. Nowhere in Herman are the walls E and G disclosed as having a half circle shape. Although Herman does not describe the functions of sections E and F, it is clear from Figures 1 and 2 that the walls E and G form substantially rectangular shapes around the sections E

¹ Hendley, col. 6, lines 5-17.

² See Hendley, Figure 3.

and F. Accordingly, Applicants respectfully submit that Herman does not disclose a front wall and rear wall that each form approximately at least one half of a circular shape as recited in amended Claim 1. Accordingly, Applicants respectfully submit that amended Claim 1 patentably distinguishes over Herman for at least the reasons discussed above.

As Claims 2 and 5-9 depend from amended Claim 1, Applicants respectfully submit that Claims 2 and 5-9 patentably distinguish over Herman for at least the same reasons as amended Claim 1.

Regarding the rejection of Claims 1-2 and 9 as anticipated by Groover, that rejection is respectfully traversed by the present response.

The outstanding Office Action points to both instances of recess (72) of Groover for the feature of front and rear engagement faces. However, nowhere in Groover are the recesses (72) described as having a wall that forms at least one half of a circular shape. Rather, the recesses (72) appear to be substantially square in shape, see Figure 2. Accordingly, Applicants respectfully submit that amended Claim 1 patentably distinguishes over Groover for at least the reasons discussed above.

Claim 1 further recites, “a front engagement member integrally molded in the vicinity of a base portion of the front seal fin, the front engagement member having a substantially planar front engagement face.”

In contrast, Groover requires a cylindrical retainer (70) to be inserted into the recesses (72) “sized and shaped for receipt within a complimentary recess (72) formed in each of the blades...”³ As the recess (72) must be “complimentary,” the recess must have a curved interior face. In other words, the recess has the shape of a half-pipe with rectangular ends (see Fig. 2). Accordingly, Groover fails to disclose a front engagement member with a

³ Groover, col. 3, lines 5-7.

substantially planar front engagement face, and Applicants respectfully submit that amended Claim 1 patentably distinguishes over Groover for at least this additional reason.

As Claims 2 and 5-9 depend from amended Claim 1, Applicants respectfully submit that Claims 2 and 5-9 patentably distinguish over Groover for at least the same reasons as amended Claim 1.

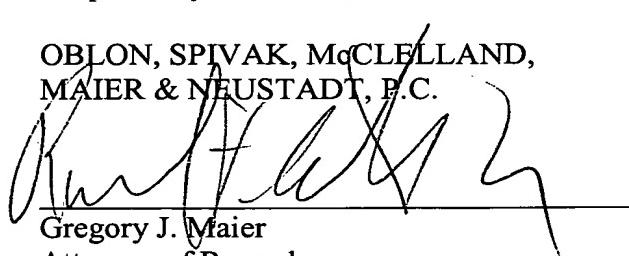
Accordingly, Applicants respectfully request withdrawal of the rejection of Claims 2 and 5-9.

Regarding the rejection of Claims 5 and 6 as obvious over either Herman or Groover, Applicants respectfully submit that as Claims 5 and 6 depend from amended Claim 1, Claims 5 and 6 patentably distinguish over Herman and Groover for at least the same reasons as amended Claim 1. Accordingly, Applicants respectfully request withdrawal of the rejections of Claims 5 and 6.

Consequently, in view of the above discussion, it is respectfully submitted that the present application is in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.

Respectfully submitted,

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